

Mitchell. (H. W.)

THE OPERATION

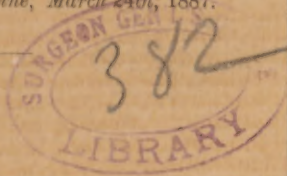
FOR

Stellate and Bilateral Laceration of
the Cervix Uteri.

BY

HUBBARD W. MITCHELL, M. D.

Read before the New York Academy of Medicine, March 24th, 1887.



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Stellate and Bilateral Laceration of the Cervix Uteri.

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Laceration of the cervix uteri consequent upon the act of parturition is an accident of frequent occurrence, and of varying degrees of severity. The suffering it entails upon the patient and the malign influence it often exerts, when neglected, enlists the sympathy and stimulates the zeal of the surgeon to effect its cure.

This accident occurs most frequently in women who are in labor for the first time, in primiparæ, as they are called, and it may be defined as a tearing of the wall of the cervix uteri during labor, either partly or wholly through its substance, in one or more directions. In the first stage of labor as the child's head, or the breech, if that be the presenting part, escapes from the uterus, the circular fibres of the cervix uteri often give way owing to the excessive distention which occurs and the cervix suffers a laceration.

The laceration may be in a single direction forming a simple or *unilateral* laceration as in Fig. 1, or it may extend in two directions, forming the more severe *bilateral* laceration as in Fig. 2, or it may extend in several directions forming the still more severe multiple or *stellate* laceration as in Figs. 3 and 4.

Fig. 1.



Unilateral Laceration of the Cervix Uteri.

Fig. 2.



Bilateral Laceration of the Cervix Uteri.

Fig. 3.

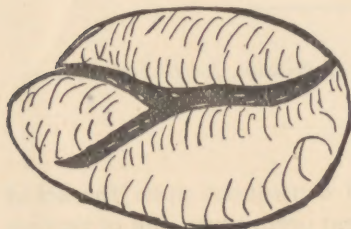
Bifid Laceration of the Cervix Uteri.
(EMMET.)

Fig. 4.

Stellate Laceration of the Cervix Uteri.
(EMMET.)

Laceration of the cervix uteri occurring as it does during labor is rarely discovered at the time by the obstetrician, for the reason that it offers no special symptom. The hemorrhage that occurs, may be the usual hemorrhage of natural child-birth, and if he should suspect that a laceration had taken place, and make a digital examination, the swollen and patulous condition of the parts would make it difficult, if not impossible of detection. It is generally months or years afterwards that the surgeon or gynecologist discovers the true condition of affairs, by a train of symptoms which are almost always unmistakable.

The lesser degrees of laceration often heal spontaneously,

and nature by her reparative processes restores the contour of the cervix, or may so far close up the gap as to prevent no after symptoms. Hence these mild cases are never seen as they require no treatment. They are, however, according to Dr. Emmet, of very frequent occurrence, and this author tells us that he doubts if a woman can give birth to her child without some laceration taking place.

It is the severer forms of laceration that manifest themselves to the patient, and attract the attention of the surgeon. I do not believe a woman can have either a stellate or a bilateral laceration of the cervix uteri, without suffering such discomfort and pain as to lead her sooner or later to consult her medical adviser.

The usual symptoms of this distressing condition are one or more of the following, as enumerated by Dr. Thomas.

1. Pain in the back and loins.
2. Sense of "bearing down."
3. Leucorrhœa.
4. Neuralgia of cervix.
5. Sometimes sterility.
6. Discomfort in locomotion.

Cases have frequently been met with where all six of these symptoms were present. The most common symptoms that have come under my notice, are the first three above-named—pain in the back and loins, sense of bearing down and leucorrhœa. This last is the most frequent of all and is rarely absent. Sometimes *sterility* is the only symptom that attracts attention. Women occasionally tell us that they have borne one or more healthy children, but from a period varying from two to ten years they have not been pregnant, although there is absolutely no reason *as far as they know* why they should not be. They complain of no pain, or of so little as not to lead them to suspect womb trouble, and they have but little leucorrhœa. This form of *sterility* is an important symptom to the mind of the surgeon, and an examination with the speculum reveals a lacerated cervix with all the accompanying conditions that make pregnancy impossible.

Another symptom, and one that is well calculated to mislead the surgeon, or not to attract his attention at all, is a persistent pain in the left side, under the border of the lower rib, and sometimes radiating down to the left ovary. The pain is of a dull character, not severe, but sufficiently annoying to lead the patient to seek medical advice. When questioned they will insist that the womb is perfectly healthy, and will tell you that the pain is due to dyspepsia, or some other popular cause. It is not to be inferred from this that all women who have a pain in the left side suffer from a lacerated cervix, but in some cases it is the only symptom of that condition. One of the severest cases of bilateral lacerated cervix I ever met with was a lady who had a pain of this character in her left side. There was no tenderness upon pressure over the spot, and I could discover nothing abnormal in that region. As this symptom was not new to me, I suggested an examination of the womb, to which she reluctantly consented, and which revealed the condition above mentioned. In private practice I have met with six well marked cases of this kind during the past two years.

In making an examination of the cervix uteri I know of no better way, especially if the surgeon has no assistant present, than to place the patient on her back on an Archer gynæcological chair, with her feet in the iron stirrups, and the hips brought well to the edge of the chair. A large sheet properly adjusted prevents any exposure. A Brewer's speculum is then introduced into the vagina, and the cervix brought clearly into view. The blades can be separated to the desired point and secured by the screw, and there need be no distortion of the parts shown. By this method the condition of the cervix can be seen perfectly and an accurate diagnosis made.

In lacerations of a severe character, especially when they are stellate or bilateral, the lips of the cervix will be found separated, greatly thickened, everted, granular, and covered with a thick tenacious mucus, altered in character, muco-purulent, or perhaps wholly purulent. Upon attempting to remove this with a bit of cotton wound on an applicator, it will be found to be very adhesive, and when removed the eroded or ulcerated granu-

lar surface beneath will bleed very freely, often profusely, and is highly sensitive to the touch.

Of course the patient's general health suffers severely, her nutrition is perverted, and she is in just that condition for epithelioma to spring into existence. Just how this terrific condition of the cervix uteri is brought about after labor is best expressed by Dr. Emmet as follows:

"When the flaps formed by the laceration are once separated, their divergence becomes increased by the anterior lip being crowded forward in the axis of the vagina, while the same force naturally crowds the posterior lip backwards into the cul-de-sac. From the obstructed circulation and by thus forcing the flaps apart a source of irritation is established which arrests the involution of the organ. The angle of the laceration soon becomes the starting point of an erosion, which gradually extends over the everted surfaces. With the increased size and weight of the uterus, induced by congestion, the tissues gradually roll out to near the internal os."

This clear and concise paragraph of Dr. Emmet describes perfectly how this state of things is brought about, and when we appreciate and understand the amount of suffering a severely lacerated cervix uteri entails upon a woman, and the liability it has to induce epithelioma, *which means a miserable and lingering death*, we shall be stimulated to early discover the accident, and to promptly adopt measures for its cure.

I am not prepared to state with any degree of certainty what proportion of cases of lacerated cervix uteri are simple unilateral lacerations, or how many are of the stellate or bilateral variety. Perhaps it is not practically important to do so. During the past five years I have examined about 4,300 cases of lacerated cervix, in dispensary and private practice, but I neglected to take careful note of the earlier cases, or to separate them into the three grades above named. My impressions are, however, that at *least one-half* of all these cases were more severe than simple lacerations, and were of the stellate and bilateral variety. Of 133 cases of lacerated cervix uteri that have been operated upon by myself, 81 were bilateral, 15 were stellate, and

the remaining 37 cases were *unilateral*, of greater or less severity.

As above stated, mild cases are often repaired by nature herself, and hence rarely come under the notice of the surgeon. It is the severer forms of this accident that he is called upon to see, and which demand his aid. Most of the cases that have come under my own notice, were of a severe character that were long past any help of natural healing, and which could only be cured by surgical means. So it may be said that any case of lacerated cervix uteri that we may be called upon to treat can be cured only by restoring the contour of the cervix by a radical and thorough surgical operation.

How best to perform this operation is a question of the gravest importance.

The technical, and perhaps fashionable name for this operation is *Trachelorrhaphy*, and the late Prof. Gross, of Philadelphia, said that "generally it is sufficiently simple to perform." My own experience tells me it is not a simple operation, even in plain unilateral lacerations, and when these are *stellate* or *bilateral* where the rent extends to, or beyond the vaginal junction, or where the torn cervix gapes like a horse's mouth, the difficulties are considerably increased. To restore the contour of the cervix, *and to restore its usefulness also*, is not a simple matter. It is on the operation for these two latter forms of the lesion that I wish especially to speak. First, as to *preparatory* treatment. Most cases of stellate and bilateral laceration when they come to our notice are in a state of active inflammation, presenting, as above noted, the hypertrophied and everted, granular and ulcerated torn flaps, usually widely separated, and bathed with a copious, viscid, leucorrhœal discharge. To operate under such conditions would be manifestly improper. Rest, as complete as possible, must be enjoined upon the patient, and the local measures to be adopted are to cleanse the parts from all discharge, and this is best done by means of absorbent cotton. The raw, granular, and ulcerated surfaces will bleed freely, often copiously upon even a slight touch. The general reflex symptoms are often severe.

The sharp curette will scrape away much of this granular

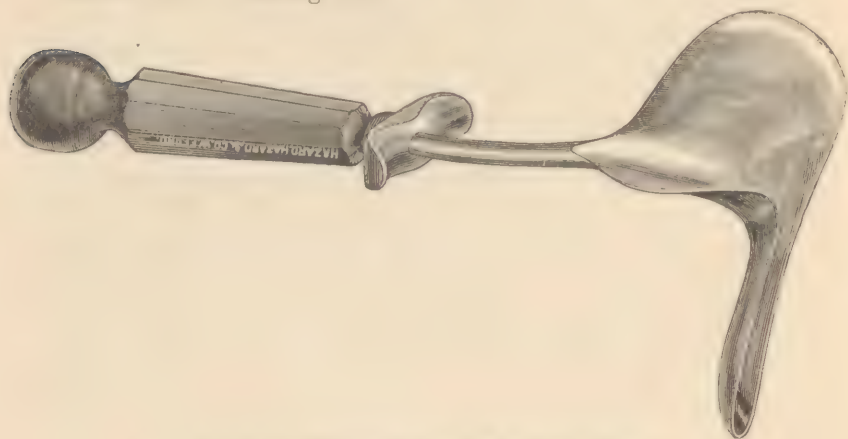
material, producing a momentary increased amount of bleeding which is beneficial as a local depletive. Little or no pain follows the use of the curette. The part may be wiped dry by the use of the absorbent cotton and a solution of nitrate of silver, 40 grains to the ounce freely applied. This may be repeated every second or third day, and in the intervals, hot water vaginal injections may be used twice or thrice daily.

A tumblerful of equal parts of tannic acid and sulphate of zinc added to a pint of hot water greatly enhances the value of these injections. The heat and astringency produce the happiest results. Under this local treatment which seems to me to be both rational and sensible, the inflammation subsides, and the patient is soon brought to a condition when she may safely submit to a radical surgical operation for her permanent cure.

THE OPERATION.

The patient should be placed upon a firm table before a strong light and profoundly etherized. Complete anesthesia is necessary to prevent nausea and retching during the operation, for the violent movements imparted to the uterus, by the act of retching are extremely embarrassing to the surgeon. She should now be placed in Sim's position—namely, upon the left side, the knees drawn up, and the hips brought close to the edge of the table. A Sim's speculum, or one of its modifications, should be employed to retract the perineum and bring the cervix within view of the operator. In view of the fact that Sim's speculum is a difficult instrument to hold in proper position during an operation, for the reason that it cramps and fatigues the hand of the assistant, so that he is liable to let it slip at a critical moment and thus embarrass the operator, and because its narrow blade does not sufficiently expand the vaginal opening, but allows the upper labium to fall downward, and the lower labium to slightly close upward by its own elasticity, thus narrowing the opening

and endangering the parts to be touched by the instruments, has led me to modify his valuable speculum and devise the one shown in the following cut.



"Dr. H. W. Mitchell's new Vaginal Speculum."

It is a Sim's blade, fitted with two broad and spreading wings, bent upon such a curve as to hold up out of the way the upper labium, and depress the lower labium, thus keeping these sensitive parts out of the way, and giving a *wide vaginal opening* through which to work. A curved metallic cross-bar enables the assistant to hold it securely in place without fatigue, and the large handle is easily and firmly grasped. The blades are made in various sizes, and one movable handle serves for all. This instrument greatly simplifies and facilitates the operation. The cervix having been brought well into view by means of this speculum, the surgeon should seize the two flaps with Emmet's long uterine tenacula and see how far they can be made to approximate. In their thickened and everted condition, already alluded to, this will be found impossible in the majority of cases of these stellate and bilateral lacerations. Next, he must determine the location of the original os if that is possible, and very often it is not, and decide where he will make the new one, for in these severe lacerations all landmarks are obliterated, and

he has before him a torn and shapeless cervix out of which he must fashion a new and useful one. Thomas, and others tell us that we must leave a strip of undenuded mucous tissue in the centre of a bilateral laceration and denude on either side of it. Practically, however, this is very often impossible, for the flaps are so everted, so hypertrophied, and so irregular, and we are compelled to cut away so much of this tissue that an undenuded strip would be greatly in the way and would not form a good os. In stellate lacerations as shown in Fig. 4 we could not leave an undenuded central strip at all. In stellate and bilateral lacerations where the original contour of the cervix is entirely lost, and the part presents a gaping and irregular shape, with no healthy point to guide us, our first step must be to choose a new site for our intended os. In such a case as shown in Fig. 2, I should ascertain with the sound which side of the laceration was the straightest and firmest side leading up into the body of the uterus. Having clearly determined this point I should locate the site of the newly intended os there, and cut freely and unsparingly away all thickened, inflamed, and unsound tissue, until I reached healthy tissue, and had made a clean, straight, smooth wound. In such a case as Fig. 3, I should follow precisely the same rule, locating the new os at the most favorable point, and convert this diverging, bifid laceration into a long straight and simple wound, cutting freely as before, until I reached perfectly sound, healthy tissue. In Fig. 4 I should select the most eligible of these stellæ for the site of the new os, and convert this star-shaped, irregular, and gaping laceration into a simple wound by an unsparing use of the knife.

During these operations the hemorrhage is very free, and when the circular artery of the cervix uteri is divided, as it almost invariably is, it is very profuse, though not dangerous. As cutting instruments, I am in the habit of using the long, curved, blunt-pointed scissors, and a slender uterine knife, holding and steadying the parts meanwhile with the long uterine tenaculum. When the bleeding is checked, we may close the wound by the interrupted silver wire suture inserted deeply into the healthy tissue on one side of the wound and brought out at

a corresponding point on the other side. Five or six wires to the inch are enough. I usually twist the wire first nearest to the new os, then cleanse the wound thoroughly from blood, and twist the other wires in succession, carefully adjusting the edges of the wound. I know of no better way of inserting these sutures than by my own method of threading the wire directly into the eye of a short three-cornered needle, and grasping the needle firmly with a Bache-Emmet needle holder, which to my mind is the best extant. This simple device of threading the wire *directly into the needle*, abolishes the silk loop entirely, makes a smaller and neater suture-wound, and is more expeditious and convenient.

My friend, Dr. George A. Peters, introduced some years since an apparatus for keeping the legs up and apart during operations in this region. It consists of a metallic cross bar, covered with leather, with a crutch-shaped expansion at either end, and a strap to buckle round the leg. By the aid of this valuable device the patient is placed on her back, the hips brought to the edge of the table, and the thighs strongly flexed upon the abdomen, and kept widely apart by adjusting this instrument just below the knee. A broad strap attached to one end near the leg, passes up and around the patient's neck, and is fastened to the end near the other leg. Dr. Peters draws the perineum downward, with a speculum, and brings the cervix into view and within reach, either by a long tenaculum, or a loop inserted into the cervix. He now denudes the parts and closes the wound by catgut sutures of large size. The advantage of using catgut is in not being obliged to remove it after the wound is healed.

I heartily concur with this eminent surgeon, and believe that in simple unilateral lacerations where few sutures are needed, his method is excellent, but in severe stellate and bilateral lacerations of a severe character as described above, there is a danger of the catgut sutures melting away before union has taken place, which sometimes requires 10 or 12 days for its completion. If this should happen the operation would go for nothing, hence in severe cases the silver wire suture would

be the safer of the two. A stellate or bilateral laceration operated upon in the radical manner I have described will leave the new os, and the newly formed cervix pointing greatly to the right or left side, or forward or backward as the case may be, according to our choice of selection. At first this may seem a great deformity, and we are apt to feel disappointed at the result. We fear our patient may be permanently sterile. But if the operation has been carefully done, and after complete union has taken place, which usually occurs by first intention, and after all irritation caused by removing the wire sutures has passed away, the absorptive processes of nature come into activity rounding and smoothing off the wounded part, and at the same time the new cervix makes an effort to right itself, and in due time we have a shapely os of almost its original contour and a well formed cervix in its proper position in the median line of the pelvis. I am not able at present to give an absolutely scientific reason why this is so, but that it is so, is demonstrated by actual experience, and is a fact familiar to most of us.

The after treatment is sufficiently simple. Rest in bed for the first seven days. Light but nutritious diet and freedom from all excitement. On the seventh day the patient may be allowed to sit up, and on the tenth or twelfth day we can remove the sutures. A few days after she may resume her duties.

Union is usually by first intention. Of the 133 cases of lacerated cervix that I have operated upon 130 healed by first intention, 1 case did not heal at all and required a second operation about five months after, when complete union occurred. 2 cases healed by first intention at the new os, but left fistulous tracts open at the side of the new cervix. Both of these cases of lateral cervical fistule were subsequently operated upon under cocaine and healed without further trouble.

Of the 81 cases of *bilateral* lacerated cervix above alluded to I have been fortunate enough to keep 8 of them who have since become pregnant, under close observation. In each of these 8 patients, the newly formed cervix turned sharply to one side immediately after the operation. Pregnancy took place and followed its ordinary course. As it progressed, each os and

cervix gradually assumed its natural contour, and at full term each of the 8 patients were confined in natural labor under my personal care. No re-laceration occurred except in one case, and this was so slight that she did not suffer at all.

Of the 15 cases of *stellate* laceration of the cervix above referred to, 13 recovered perfectly, with no untoward symptoms, and with good looking cervixes. One case was very rebellious and healed slowly by granulation. The contour of the cervix was slightly distorted and she will be permanently sterile. The other stellate case healed by first intention, but when I removed the sutures, the tissue was so friable that the whole wound gave away. I operated upon her a second time one month after under cocaine, with a perfect result. The wound healed kindly, and her new cervix is quite æsthetic in appearance, but she is probably sterile. She is perfectly satisfied to remain so. In conclusion it may be said that in cases of *stellate* and *bilateral* lacerations of the cervix uteri, where no precise rules can be laid down for operation, the surgeon must choose in each individual case at what point he will locate his new os and form his new cervix. He must be both careful and radical, and if he does his operation thoroughly and well, with a due appreciation of the importance of his work, and the great results that follow, he will be rewarded by a large measure of success.

NEW YORK, March 24th, 1887.

No. 747 Madison Avenue.

